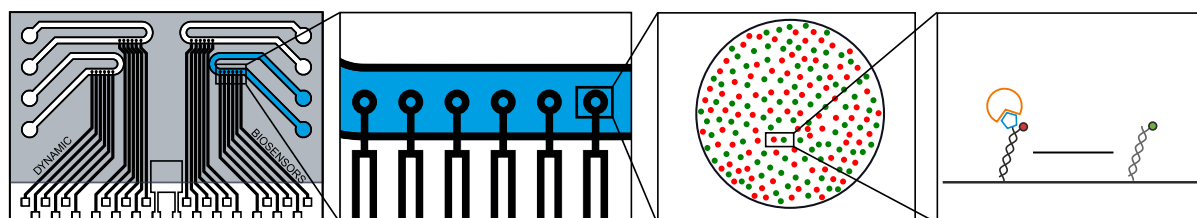


Product Description

Product Code	MPC2-48-2-G1R1-S
Suitable for	switchSENSE® DRX ^{red} & DRX ²
Storage	Store at 2-8 °C, dry in the dark
Layout	Each spot, mixture of nanolevers A and B
Grade	Standard

Multi-purpose chips are versatile tools to analyze protein-protein, protein-small molecule, DNA/RNA-protein and DNA/RNA-small molecule interactions.

Biochip Design



Biochip with 4 flow channels, each with multiple detection spots in series

6 detection spots in 1 flow channel

Each detection spot: nanolevers with red fluorescent dyes

Nanolevers with the same sequence and fluorescent dye

The detection spots are functionalized with two different nanolevers, NL-A48 and NL-B48. The 5'-end of the DNA is fixed on the surface while the 3'-end carries a fluorescent dye, either a green one (G1) on NL-A48 or a red one (R1) on NL-B48.

Biochip Layout | Flow channels with 6 double (A, B) spots (real-time on-spot referencing or sophisticated assays)

MPC2 biochips carry a mixture of two nanolever populations (red & green) on the same sensor spot. Use one nanolever as the target and the other as the control for absolute data confidence or use this set-up to investigate more complex and challenging issues.



For more information about the DNA sequences, please contact us at info@dynamic-biosensors.com.

DNA for the Biochip

Each Biochip comes with unmodified complementary DNA:

cNL-P48T80 (500 µL, c = 1 µM)

cNL-P80T80 (500 µL, c = 1 µM)

Application Areas

Binding Kinetics	k_{on} , k_{off} , K_D
Binding Affinity	K_D , titration curve, n (Hill coefficient)
Protein Diameter	D_H (Hydrodynamic diameter)
Conformational Change	ΔD_H (relative change of hydrodynamic diameter)
Melting & Thermodynamics	T_M , ΔG , ΔH , ΔS
Multimers & Aggregation	Monomer-dimer discrimination, aggregation
Nuclease & Polymerase Activity*	k_{cat} , K_M , $T_{activate}$
Bispecific Binders & Avidity*	Binding affinity/avidity/kinetics;

* for this application, other biochips (MPC or BIF) are recommended

Biochip Handling

The biochip is ready to use. For research use only.

Avoid touching or picking up the biochip with your hands as this may cause electrostatic discharge, which harms the bilayer. Instead, always use the vacuum tweezers provided with the instrument when handling the biochips.

After installing the biochip in the DRX instrument and before starting an experiment be sure that the selected channel has been passivated with passivation solution (Order No. SOL-PAS-1-5).

More information about biochip storage and handling can be found in the document “switchSENSE® Biochips Storage Information” – [DOWNLOAD HERE](#).

Grade I Standard

Standard grade chips are batch tested, which means selected chips undergo comprehensive quality control (switching dynamics, voltage-response of the DNA layer, and fluorescence levels). In addition, the fluorescence levels on each electrode are tested to be within specifications. Due to the production process not all detection spots fulfill our high quality standards. It is guaranteed that 20 or more detection spots are QC approved.

Compatible Functionalization Kits

All compatible functionalization kits for this biochip are listed on our website:

www.dynamic-biosensors.com/reagents/

Contact

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